

Title (en)
DISPENSING PUMP WITH CUP SPRING

Title (de)
SPENDERPUMPE MIT TELLERFEDER

Title (fr)
POMPE DE DISTRIBUTION AVEC RESSORT BELLEVILLE

Publication
EP 3102336 A4 20171213 (EN)

Application
EP 14878341 A 20141231

Priority
• US 201461926490 P 20140113
• US 2014072926 W 20141231

Abstract (en)
[origin: WO2015105715A1] A dispensing pump (10) for liquids, viscous materials, foams, gels, etc. includes a resilient cup spring (18) so that the entire pump can be more easily recycled. The dispensing pump (10) includes a base portion (12), an inlet valve (14), a piston valve (16), a cup spring (18), a spring guide structure (20) and a pump actuator (22). When actuated, the cup spring (18) is elastically deformed over opposing spring ribs (39), and then upon release, the cup (18) elastically returns to its normal at rest shape, returning the guide (20) and pump actuator (22) to their normal at rest positions. The cup spring (18) includes structures which interact with the piston valve (16) to open the outlet valve.

IPC 8 full level
B05B 11/02 (2006.01)

CPC (source: EP US)
B05B 11/1001 (2023.01 - EP US); **B05B 11/104** (2023.01 - EP US); **B05B 11/1069** (2023.01 - EP US); **B05B 11/1077** (2023.01 - EP US); **F16F 1/025** (2013.01 - EP); **F16F 1/028** (2013.01 - EP)

Citation (search report)
• [A] US 2009140009 A1 20090604 - CHEN PIN-YEN [TW]
• [A] WO 2004004921 A1 20040115 - KELTUB B V [NL], et al
• [A] WO 2012126928 A2 20120927 - RPC BRAMLAGE GMBH [DE], et al
• [A] US 2011084099 A1 20110414 - CARTA LAMBERTO [IT]
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US11660627B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
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DOCDB simple family (application)
US 2014072926 W 20141231; BR 112016015602 A 20141231; CN 201480073064 A 20141231; EP 14878341 A 20141231; US 201415108811 A 20141231